UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/537,118	03/29/2000	Harry Dugger III	N9810.0007/P007	7521

24998 7590 10/16/2008

DICKSTEIN SHAPIRO LLP
1825 EYE STREET NW
Washington, DC 20006-5403

EXAMINER	
HAGHIGHATIAN, MINA	
ART UNIT	PAPER NUMBER
1616	

MAIL DATE	DELIVERY MODE
10/16/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/537,118	DUGGER, HARRY	
	Examiner	Art Unit	
	MINA HAGHIGHATIAN	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *27-32,34,54-59,80 and 81* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27-32,34,54-59,80 and 81* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/26/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of Amendments and Remarks filed on 07/02/08 and an IDS filed on 02/26/08. Claims 80-81 have been amended, while no claims have been canceled or newly added. Accordingly claims **27-32, 34, 54-56, 57-59 and 80-81** remain pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 27-32, 34, 54-56, 57-59 and 80-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deihl (WO 9413280) in view of Swaminathan et al (WO 9733621).

Deihl teaches a **sprayable analgesic** composition comprising an analgesic compound which is absorbed into the bloodstream through the **buccal mucosa** and a pharmacologically acceptable liquid carrier. In a preferred embodiment the active agent is ibuprofen and the liquid carrier is **aqueous ethanol** (see page 3). The formulation may also contain other ingredients such as surfactants, humectants, **flavoring agents**, etc (see page 4). The table in example I shows the concentration ranges of each ingredient (SD alcohol and distilled water add up to provide a concentration of about 55% polar solvent. The formulation also contains about 12% active agent and about 3% fruit juice as flavoring). Deihl fails to disclose other suitable active agents for the said formulation, or the use of other solvents including polyethylene glycol and non-polar solvent.

Swaminathan et al teaches pharmaceutical compositions comprising an unpleasant tasting drug. The said formulations comprise an active agent, an effective amount of a polyhydric alcohol based carrier, which is an acceptable solvent and includes a polyol or a polyhydric alcohol such as propylene glycol or glycerine (see page 3). The polyol or polyhydric alcohol component of the composition may be selected form the group consisting of propylene glycol, glycerol, ethyleneglycol, diethylene glycol, dipropylene glycol, diglycerol, ethylene oxides, PEG 4000, PEG 6000, etc (see page 5). The formulations may also incorporate water in of up to about 40% by weight (page 6, lines 19-23). Other ingredients used in the said formulations include higher fatty acids, higher fatty acid esters, glycerine fatty acid esters, etc (see page 1).

Swaminathan also teaches that active agents may be selected from antacids, anti-inflammatory substances, analgesics, coronary dilators, diuretics, vasodilators, anti-infectives, stimulants, anti-histamines, decongestants, psychotropic, hypnotics, sedatives, anti-asthmatics, H2-receptor antagonist, etc. The examples of drugs include ibuprofen, ketoprofen, diclofenac, diltiazem, alprazolam, metoclopramide, erythromycin, azithromycin, etc (see page 3, line 28 to page 4, line 19).

Swaminathan et al also discloses that the said formulations may be in the form of a clear solution, dispersion or emulsion. A liquid formulation is preferred (see page 7).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made given the general teachings of formulations for buccal mucosal administration of Diehl, to have looked in the art for other specific active agents and solvents suitable for spray formulations of liquid carriers, as taught by Swaminathan et al, with reasonable expectations of successfully preparing suitable formulations for various therapies. Furthermore it would have been obvious to one of ordinary skill in the art to have substituted any suitable active agent for the analgesics of Diehl's buccal spray formulations as claimed. In other words, the claims would have been obvious because the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Claims 27-32, 34, 54-56, 57-59 and 80-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fu et al (WO 9303751) in view of Swaminathan et al (WO 9733621).

Fu et al teach compositions and methods for the sublingual or **buccal administration** of therapeutic agents. The compositions comprise a therapeutic agent **dissolved** or dispersed in a carrier which comprises a solvent, an optional cosolvent, and an oral mucosal membrane transport enhancing agent. The solvent comprises from about 50% w/v to about 95% w/v of the carrier of a non-toxic alcohol. Non-toxic alcohols useful in the said formulations include **ethanol**, isopropanol, stearyl alcohol, **propylene glycol, polyethylene glycol** and the like. Most preferred alcohol is ethanol. The cosolvent is selected from **water** (page 4, lines 12-26). Essential or volatile oils such as **peppermint oil**, spearmint oil, menthol, etc, are added in a concentration of between about 1 and 5% w/v (page 5, lines 4-10). The said liquid compositions are formulated in a **liquid spray** or a **liquid drop** (page 6, lines 1-2). Fu et al, concentrating on proteins and polypeptides, lack teachings on other active agents.

Swaminathan et al, discussed above, teach various active agents suitable for said formulations.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made given the general teachings of formulations for buccal mucosal

administration of Fu et al, to have looked in the art for other specific active agents suitable for spray formulations of liquid carriers, as taught by Swaminathan et al, with reasonable expectations of successfully preparing suitable formulations for various therapies. Furthermore, it would have been obvious to one of ordinary skill in the art to have substituted any suitable active agent for the active agents of Fu et al's buccal spray formulations with expectation of success. In other words, the claims would have been obvious because the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Claims 27-32, 34, 54-56, 57-59 and 80-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fu et al (WO 9303751) in view of Physicians' Desk Reference.

Fu teaches compositions and methods for the sublingual or buccal administration of therapeutic agents. The compositions comprise a therapeutic agent dissolved or dispersed in a carrier which comprises a solvent, an optional cosolvent, and an oral mucosal membrane transport enhancing agent. The solvent comprises from about 50% w/v to about 95% w/v of the carrier of a non-toxic alcohol. Non-alcohols useful in the said formulations include ethanol, isopropanol, stearyl alcohol, propylene glycol, polyethylene glycol and the like. Most preferred alcohol is ethanol. The cosolvent is selected from water (page 4, lines 12-26). Essential or volatile oils such as peppermint oil, spearmint oil, menthol, etc, are added in a concentration of between about 1 and 5%

w/v (page 5, lines 4-10). The said liquid compositions are formulated in a liquid spray or a liquid drop (page 6, lines 1-2). Fu et al lacks teachings on diazepam.

Physicians' Desk Reference teaches specific active agents for therapeutic use such as clozepine, phenytoin and diazepam solutions for injection for treating disorders such as psychotic, convulsion and anxiety.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made given the general teachings of formulations for buccal mucosal administration of Fu et al, to have looked in the art for other specific active agents suitable for spray formulations of liquid carriers, as taught by Physicians' Desk Reference, with reasonable expectations of successfully preparing suitable formulations for various therapies. Furthermore it would have been obvious to one of ordinary skill in the art to have substituted any suitable active agent for the active agents of Fu et al's buccal spray formulations as taught by Physicians' Desk Reference. In other words, the claims would have been obvious because the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent

and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims **27-32, 34, 54-56, 57-59 and 80-81** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,110,486. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are anticipated by the reference claims. In other words, claims 27-32, 34, 54-56, 57-59 and 80-81 are generic to all that is recited in claims 1-9 of U.S. Patent No. 6,110,486. Specifically, the buccal spray composition comprising central nervous system active amines, sleep inducers and benzodiazepines and a polar solvent recited in claims of instant Application are anticipated by the composition recited in claims 1-9 of U.S. Patent No. 6,110,486.

Claims **80-81** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of U.S. Patent No. 6,676,931 in

view of Swaminathan et al (WO 9733621). Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are obvious over the reference claims. Specifically, the method of administering a buccal spray composition comprising active agents such as benzodiazepines as recited in claims of instant Application are obvious over the composition recited in claims 1-2 of U.S. Patent No. 6,676,931 in view of Swaminathan et al. The difference is that the reference claims are drawn to a composition comprising cyclosporine. Swaminathan et al disclose that substituting one active agent for another in the same carrier system is obvious.

Claims **27-32, 34, 54-56, 57-59 and 80-81** are provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14, 30-40 and 56-76 of co-pending Application No. 10/230,086. The double patenting rejection is proper because the examined claims and the reference claims are substantially the same. The difference is that claims of the co-pending Application '086 recite a broad scope of active agents which includes some of active agents claimed in instant claims. Thus the instant claims are anticipated by the reference claims.

This is a provisional obviousness-type double patenting rejection.

Claims **27-32, 34, 54-56, 57-59 and 80-81** are provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-31, 64-91 and 124-134 of co-pending Application No. 10/230,060. The double

patenting rejection is proper because the examined claims and the reference claims are substantially the same. The difference is that claims of the co-pending Application '060 recite a broad scope of active agents which includes some of active agents claimed in instant claims. Thus the instant claims are anticipated by the reference claims.

This is a provisional obviousness-type double patenting rejection.

Claims **27-32, 34, 54-56, 57-59 and 80-81** are provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-19, 45-59 and 84-85 of co-pending Application No. 10/230,085. The double patenting rejection is proper because the examined claims and the reference claims are substantially the same. The difference is that claims of the co-pending Application '085 recite a broad scope of active agents which includes some of active agents claimed in instant claims. Thus the instant claims are anticipated by the reference claims.

This is a provisional obviousness-type double patenting rejection.

Claims **27-32, 34, 54-56, 57-59 and 80-81** are provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims of co-pending Application Nos. 10/230,072; 10/230,059; 10/230,086; 10/230,080; 10/230,075; 10/230,073; 10/671,708; 10/671,709; 10/671,715; 10/671,720; 10/671,719; 10/671,717; 10/671, 710; 10/726,625; 10/726,585; 10/834,815; 10/663,817 and 10/928,997 in view of Swaminathan et al (WO 9733621). The double patenting rejection is proper because the examined claims are obvious over the reference claims. The

difference between claims of the instant application and the claims of the reference applications is the active agents. For example, Application 10/230,075 recites active agents such as anti-arrhythmics, anti-hypertensives, heart regulators, vasodilators, etc. Application 10/230,059 recites active agents such as anti-opioids, anti-migraines, pain control agents, etc. Application 10/663,817 recites active agents such as sleep inducers, antivirals, antibiotics, antiasthmatics, antiemetics, etc. It is also noted that many such classes of active agents are common or overlap with the agents of the instant application. Swaminathan et al (WO 9733621) teaches that various active agents can be used in the said solvent system for administration. Thus it would have been obvious to one of ordinary skill in the art to have substituted one active for the other in the same solvent system for the same method of administration.

This is a provisional obviousness-type double patenting rejection.

Pertinent Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1) Oguri et al (JP 02-026661) teaches formulations for aerosol delivery comprising an active agent and a liquid carrier. Suitable active agents include analgesics and carrier formulations include polar and non-polar solvents and other agents. Carrier formulations may comprise a mixture of a polar and a non-polar solvent. Polar solvents include water, alcohols such as ethyl alcohol, propylene glycols. Non-

polar solvents include hydrocarbons or halogenated hydrocarbons are suitable. Menthol is one of flavors used.

2) Kim (6,143,329) teaches aqueous-based pharmaceutical compositions comprising an active agent such as triamcinolone, purified water, Polysorbate and dextrose (see example 1). The said formulations are placed in a spray bottle for delivery to the surface of mucosa.

Response to Arguments

Applicant's arguments filed 07/02/08 have been fully considered but they are not persuasive.

Applicant argues that Deihl would not have been considered a credible or relevant teaching because "each spray is 50 microliters and contains 1 milligram of acetaminophen or ibuprofen. This treatment is repeated once after five minutes. That is, Deihl teaches a total dose of 4-8 milligrams of acetaminophen or ibuprofen". Applicant however agrees that "Deihl purports to teach a sprayable analgesic composition where an analgesic is capable of being absorbed into bloodstream through the buccal mucosa" and that Deihl's compositions comprise acetaminophen or ibuprofen in an aqueous ethanol base. Applicant is arguing limitations not claimed. Claims are drawn to a method of **administering** a composition to the buccal mucosa by spraying the oral mucosa with the said compositions comprising various active agents such as anti-spasmodics, anti-diarrheals, anti-diuretics, agents for treating nausea, etc. The said

compositions comprise the active agent in an amount between 0.001 and 60% and a polar solvent in an amount between 30 and 99.69% both by weight of the composition. The formulation exemplified by Deihl (example 1) comprises about 1.93% acetaminophen (an active agent) and about 51.87% of a polar solvent mixture such as ethanol and water. Thus Deihl is clearly teaching a composition comprising an active agent and the polar solvent in amounts that overlaps the required amounts in the instant claims. Deihl teaches and Applicant agrees, delivery of the said sprayable formulation to the oral mucosa for absorption through the buccal mucosa. Therefore, it is clearly shown that Diehl et al in combination with Kanios et al meet all the limitations.

Applicant's argument that Diehl does not teach a therapeutic amount is not persuasive because Deihl specifically compares oral dosages and buccal dosages and teaches that patients need less medicaments for buccal absorption than they would for oral (gastrointestinal) absorption. Diehl discloses that as little as $1/20^{th}$ of an oral dose of a medicament may be needed for buccal administration. Thus it is disclosed that Diehl's dosage is at a therapeutic level. Also as stated above, the amounts disclosed in Diehl's example is within a concentration range claimed as "therapeutic amount" by Applicant. Thus the limitations are met.

Applicant continues to argues that Deihl only discloses at most administering 8 mg of acetaminophen and even at $1/20^{th}$ of the oral dose (which would be about 16 mg), 8 mg is a fraction of that. This is again not persuasive. Claims have been amended to include the term "pharmacologically effective amount". 1) Specification does not fully describe or provide a dosage range for pharmacologically effective amount. 2)

Examples show that (pharmacologically effective) amounts present in each formulation is as small as 0.5% sumatriptan (see Example I). Deihl's 1.93% active agent clearly meets the 0.5% limitation of instant claims.

Furthermore, optimization of ranges is a known practice in the art and one of ordinary skill in the art is clearly able to adjust the dosage to make the preparation pharmacologically effective. In another words, "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." ***In re Aller***, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); see also Peterson, 315 F.3d at 1330, 65 USPQ2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969); Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056 (Fed.Cir. 1990); and *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). See MPEP 2144.05. Also, claims would have been obvious because the technique for improving a particular formulation was part of the ordinary capabilities of a person of ordinary skill in the art, in view of the teaching of the technique for improvement in other situations.

Applicant argues that according to Remington, 19th ed. "when only small amounts of drugs are required to gain access to the blood, the buccal route may be satisfactory, providing the physicochemical prerequisites for absorption by this route are present in

the drug and dosage form. Only a few drugs may be given successfully by this route". This is not persuasive. Various references e.g. Deihl, Fassberg and Cassidy et al, 1993, *Controlled buccal delivery of buprenorphine* (copy provided) have shown that many different active agents such as analgesics, polypeptides, antibiotics, etc, can successfully be administered to the buccal mucosa. Also there is no criticality disclosed by the Applicant in spraying the recited agents to the oral mucosa. In fact as seen in cited references and many co-pending applications, it is obvious that many different active agents can be included in the same formulation base and successfully sprayed in the oral mucosa. Therefore substituting different active agents in the same solvent formulation is an obvious variation and does not alter the scope of the claim.

Applicant argues that Fu et al teaches compositions for sublingual delivery of specific polypeptides and in the presence of a permeation enhancer. This is not persuasive because Fu teaches sublingual delivery of formulations comprising a therapeutic agent, particularly polypeptides. Also it is noted that instant formulations employ the open-ended language of "comprising" and do not exclude permeation enhancers. Thus presence or absence of the permeation enhancers is not relevant to the examination of instant claims here.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINA HAGHIGHATIAN whose telephone number is (571)272-0615. The examiner can normally be reached on core office hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mina Haghighatian/

Mina Haghighatian
Primary Examiner
Art Unit 1616